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Are labels delivering what they intend? Explicit value of fair-trade labels versus implicit value of fair trade characteristics.

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**Poster paper prepared for presentation at the EAAE 2014 Congress
'Agri-Food and Rural Innovations for Healthier Societies'**

August 26 to 29, 2014
Ljubljana, Slovenia

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Abstract

While consumers are increasingly interested in the ethical characteristics of food products, market shares of these products remains low. So far, not much research has been directed towards the efficacy of labels. Using incentive compatible stated choice experiments in a natural consumer environment, we show that dispersion exists between the explicit value of a fair trade label and the implicit values attached to the underlying characteristics of the label. Our findings thus imply that linking the fair trade label closer with peoples' values provides opportunities to expand the fair trade market.

1. Introduction

The chocolate industry represents a multi-billion euros industry with important corporate social responsibility and sustainability issues (Bradu et al., 2013). The largest share (68%) of the main ingredient cocoa is produced in West African followed by Asia (18%) and South America (14%) (Max Havelaar, 2012). World cocoa production has risen at an average annual growth rate of 3.3% from 2002 to 2012. Consumption peaked at a record level of around 5.54 million tonnes in 2010 and forecasts estimate a growing demand due to rising GDP and population growth (ICCO, 2012). Despite the increasing production and consumption, the majority of producing countries are characterized by poor infrastructure and a (very low) GDP per capita (ICCO, 2007). Labour problems, including child labour, price volatility, low productivity and shortfalls in both social and environmental sustainability have all been linked to the cocoa production sector in the past (Bradu et al., 2013; Beyer, 2012; Krain et al., 2011).

Due to these challenges and pressures, the cocoa sector has been announcing ambitious targets for supplying certified cocoa. Governments and other stakeholders, such as NGO's and development organizations, are setting up specific initiatives that focus on sustainable cocoa production (KPMG, 2012). Therefore, demand of chocolate producers for certified sustainable cocoa is rising sharply. However, on the consumer side, demand for certified chocolate such as the fair trade labeled chocolate, is not marked by such a sharp increase.

Previous research shows that consumers are increasingly interested in the ethical characteristics of food products and are willing to pay a premium for products that live up to certain ethical standards (Vranken and Rousseau, 2013; Hughner et al, 2007; Loureiro and Lotade, 2005). Nevertheless, the share of ethically produced food in total consumption has remained low because ethical attitudes do not always translate into purchasing behavior (Langen 2011, Vermeir and Verbeke, 2006; Padel and Foster, 2005). For Belgium, a recent study indicates that Belgian consumers are willing to pay a premium of 10-15% for fair trade chocolate. Besides, 50% of consumers report to have bought fair trade chocolate in the final year and 96% of the consumers reports to be satisfied by their purchase (BTC, 2012). The market share of fair trade chocolate in Belgium however is estimated to be less than one percent (Fairtrade International, 2012). This means that there exists some sort of attitude/behaviour gap. Previous studies identified the following main barriers towards the consumption of food with ethical characteristics: the relatively high price premium (e.g. De Pelsmacker et al., 2005), the real or perceived lack of availability (Vermeir and Verbeke, 2006), the lack of information (Vranken and Rousseau, 2013), lack of knowledge of and trust in the label (e.g. McEachern and McClean, 2002; Krystallis et al., 2008).

This paper focuses on the information and knowledge barrier that consumers are facing. Previous research on information and labels indicates that information provisioning can alter the demand for ethically produced food. Tagbata and Sirieix (2008) show that the willingness-

to-pay (WTP) for fair trade labels increases when information is given regarding these labels in the experiment. Also Loureiro and Lotade (2005) find higher premiums for labeling programs after consumers were previously informed about them. Rousseau and Vranken (2013) demonstrate how policy makers can affect consumers' WTP by making information about the true impact of organic food. These studies have in common that they explicitly give information about the label during the experiment and consequently measure the difference with the initial WTP. However, this might result in some prominence and priming biases. Therefore, we opt to analyze consumers' preferences towards labels and their underlying characteristics without providing explicit information about the label prior or during the study. We use two similar choice experiments that both ask consumers which chocolate bar they would buy. The difference between the two choice experiments lies in the way fair trade enters participants' choice sets. In the first choice experiment (CE1), one of the attributes is a fair trade label thus forcing participants to take the label explicitly into account in their multi-attribute trade-off. However, in the second choice experiment (CE2), we do not include the fair trade label as such but create attributes for the main fair trade characteristics. This setup allows us to investigate whether a fair trade label increases consumers' WTP and which underlying characteristics of the fair trade label are most and least valued by consumers. Results indicate that there exists a difference between the value consumers attach to a fair trade label and the value they attach to the bundle of (underlying) fair trade characteristics. Our findings thus imply that linking the fair trade label closer with the characteristics it embodies provides major opportunities to expand the fair trade market.

Our study relies on surveyed data from two choice experiments and we acknowledge that stated preference methods are often criticized because ethical consumption is usually lower in actual markets than what one would expect from survey based studies (Eckhardt et al., 2010). Nevertheless, actual market behavior would not allow us to study the difference between the fair trade label value and its underlying characteristics. Besides, we try to overcome these shortcomings in two ways. Firstly, by conducting the choice experiments in a natural consumer environment (namely the supermarket), we try to overcome the hypothetical lab setting that may accentuate changes in peoples' behaviour more easily (Benz and Meier, 2008). Secondly, we impose incentive compatibility on half of our sample to limit social desirability (Norwood and Lusk, 2011).

2. Method

To estimate consumers' preferences for a fair trade label and implicit fair trade characteristics, we conduct a discrete choice experiment. A discrete choice experiment is a stated preference elicitation method introduced by Louviere and Hensher (1982) especially suited to deal with multidimensional choices such as purchase decisions. A choice experiment is a survey-based or experiment-based¹ method for modelling preferences for goods, where goods are described in terms of attributes and the levels that these take (Hanley et al., 2001). People are presented with multiple choice sets with alternatives of a particular good and asked to choose their preferred alternative in order to understand the trade-offs that respondents are willing to make among attributes. Because price is included as one of the attributes of the good, the willingness-to-pay for each attribute can be indirectly recovered from peoples'

¹ Choice experiments can be incentive compatible when they are based on binding experiments where participants have to make actual payments if they decide to buy the product under consideration.

choices. To allow results to be interpreted in standard welfare economic terms, a baseline alternative or ‘no-choice’ option is included.

The choice model we use in this study is based on random utility theory (e.g. Ben-Akiva and Lerman, 1985) which states that the utility of a respondent i ’s choice for alternative j (U_{ij}) is comprised of a deterministic, observable component V_{ij} and an error, unobservable component ε_{ij} (Eq. (1)). V_{ij} is usually specified as a linear relationship, additive in utility, where X is a vector of k attributes associated with alternative j – in this case the characteristics of a chocolate bar – and β is the corresponding coefficient vector. Choosing one alternative over the others implies that the utility of the chosen alternative exceeds the utility associated with the other alternatives.

$$U_{ij} = V_{ij} + \varepsilon_{ij} = \beta X_{ij} + \varepsilon_{ij} \quad (1)$$

Choice experiment data are typically estimated by conditional logit (CL) models which assume that the random component of the utility of the alternatives is independently and identically (Gumbel) distributed (i.i.d.) with a type I extreme value (EV) distribution (McFadden, 1974). Conditional logit models assume preference homogeneity across respondents and define substitution patterns by the independence of irrelevant alternatives restriction (IIA). IIA implies that only one fixed vector of parameters is estimated for the choice attributes, and hence all respondents are assumed to have the same taste for the attributes (e.g. Hensher 1999). If these conditions are met, the probability of choosing a particular alternative takes the form of a logistic distribution that enables estimation through maximum likelihood (ML) procedures (Birol et al., 2006; Green, 2003).

Traditionally heterogeneity in conditional logit models can be tackled through inclusion of socio-economic variables as interactions with attributes and alternative-specific constants, or by estimating different models for different subsets of data. Alternatively, one can relax the IIA assumption to account for preference heterogeneity by using models such as the mixed logit model (Train, 2003). The mixed logit utility function includes a vector of random coefficients of the attributes X_k for individual i in the deterministic component (V) in Eq. (1) that incorporate individual preference deviations with respect to the mean (Eq. (2)).

$$U_{ij} = \beta_i X_{ij} + \varepsilon_{ij} = \beta X_{ij} + f(\beta) X_{ij} + \varepsilon_{ij} \quad (2)$$

In this paper, we first estimate a conditional logit model for the two choice experiments, followed by the mixed logit estimations. Since all random parameters are dummy variables, we assume parameters follow a uniform distribution in the mixed logit model (Hensher et al., 2005). Besides, the price parameter is considered fixed to avoid difficulties in calculating WTP measures (Train, 2003).

3. Choice Experiments

3.1. Experimental design

Two choice experiments and a survey were conducted to investigate consumers’ total WTP for a fair trade label and their WTP for the underlying characteristics of a fair trade label. For several reasons, chocolate was chosen as the studied food product. First, Belgians consume 6 kg of chocolate on average per person per year making it a well-known and frequently bought product limiting the novelty bias (List & Shogren, 1999). Second, as

chocolate bars are available in conventional, fair trade and bio-fair trade versions, we are able to make the two choice experiments incentive compatible since existing versions of the choice experimental products can be offered to participants. Thirdly, chocolate is an easy-to-handle food product in the tasting treatment (see further).

Next to the choice experiments, participants filled in a survey. The survey contained socio-demographic questions (gender, age, education, household constitution, etc.), questions measuring social and environmental attitudes (travel preferences, doing volunteer work, member of environmental NGO, donations to charity, etc.) and questions relating to Fair trade (prejudices, knowledge, trust, frequent buyers, belief, etc.).

Participants completed two generic choice experiments. In the first choice experiment (CE1), each respondent faced three different choice sets, each consisting of two alternative chocolate varieties (A and B) and the option not to buy any chocolate variety. The chocolate varieties were described using four attributes: quality & taste, label, origin of cocoa and price (see Table 1 for the different levels for each attribute). Each respondent was asked which chocolate variety they would prefer to buy. In the second choice experiment (CE2), each respondent faced six different choice sets, each consisting of two alternative chocolate varieties (A and B) and the option not to buy any chocolate variety. The chocolate varieties were described using five attributes: environmental impact, price paid to producer, level of community investment, working conditions and price (see Table 1 for the different levels for each attribute). Each respondent was asked which chocolate variety they would prefer to buy. In CE2, respondents were asked to assume that the chocolate was of their preferred quality and taste and that the cocoa came from their preferred country of origin.

Considering that the full factorial design of the two choice experiments would include 162 ($=3^4 * 2$) different chocolate varieties for CE1 and 810 ($=3^4 * 5 * 2$) for CE2, we limit the number of varieties included in our survey. The choice experiments are designed starting from an orthogonal main effects plan (OMEP) which allows the uncorrelated estimation of all main effects under the assumption that all interactions between attributes are negligible. The search algorithm developed by Street et al. (2005) is used to arrive at an optimal experimental design. For CE1 we thus selected an OMEP including 9 different chocolate varieties and transformed this OMEP to construct 9 different choice sets. For CE2, an OMEP including 18 different chocolate varieties was used to construct 18 different choice sets. Both choice experiments were randomly blocked into 3 blocks in order to limit the cognitive burden. This means that each respondent needed to answer 3 choice sets from CE1 and 6 choice sets from CE2. The cards of CE1 and CE2 were presented to all respondents. However to limit priming and order effects, we first presented the choicecards of CE1 followed by these of CE2 to half of the respondents and vice versa to the other half of the respondents.

3.2. Data description

The choice experiments were conducted in a local supermarket in January 2013. Table 2 gives a description of the socio-economic characteristics of the participants. The average respondent was 42 years old. 38% of respondents were female and 72% of our sample enjoyed education above secondary school level. A major share of respondents had a relatively high net household income of more than 3000 euro per month. The survey also provided information about the pro-social values of our respondents: 20% is member of a nature protection, 49% did ever volunteer work and 73% donates yearly to charity.

When we asked respondents whether they purchase the conventional or fair trade variant if available, half of them states that they (almost) never purchase the fair trade option, 42% regularly opts for fair trade and 5% always purchases fair trade. In the group of fair trade

buyers, 75% states they buy only one to three different types of fair trade products. Looking at peoples' judgment on fair trade compared to conventional products, we find that on average, consumers think both products have a similar taste. However, more than half of respondents rate fair trade products worse on both price and availability. In our sample, only one fourth of respondents could identify the correct definition of fair trade. Finally, 70% of respondents believe that Fair trade guarantees what it promises although only 50% do personally care about the issues addressed. One fourth feels that fair trade does not fulfil all its promises but they still believe fair trade to be better than conventional products.

4. Empirical results

4.1. Baseline estimation results

Before discussing the results of the choice experiments, we want to make two important points. Firstly, although choice experiments already embody a multi-attribute trade-off which reduces strategic biases, there remains a possibility of inflated coefficients due to e.g. social desirability. Therefore we stress that we are interested in the relative preferences and relative differences rather than the absolute values of coefficients and WTP estimates. Secondly, some attributes that consumers find important in chocolate purchases such as brand type could not be included in the choice experiment design. This exclusion could create abstraction from reality for some consumers and this might influence coefficient estimates.

We first analyze CE1 using a conditional logit model including only the main effects to understand the consumers' chocolate preferences (Table 3). Since all categorical variables are dummy coded, estimated coefficients should be interpreted and compared to the reference level being a non-labelled chocolate bar consisting of low quality cocoa beans that were grown in Ivory Coast. Although our choice experiment is generic, we include an alternative specific constant (ASC) for the status quo alternative (i.e. the no-choice option) to control for the status quo effect. A negative significant coefficient indicates that there is a utility premium for moving away from the status quo i.e. respondents prefer to buy a chocolate bar over not buying one at all. In general, people prefer a higher percentage of quality cocoa beans in their chocolate. The coefficient of the '70% quality cocoa' attribute is statistically different from all other coefficients in the model (Wald tests) indicating that taste and quality remain major drivers for chocolate purchases.

For the label attribute, we find that consumers attach importance to the ethical aspects linked to cocoa production. Both a fair trade label and a bio-fair trade label are preferred above no label being present on the chocolate. Besides, a Wald test shows that a bio-fair trade label is preferred to chocolate with a regular fair trade label ($p=0.008$).

For cocoa origin, we find a slight preference ($p=0.097$) for cocoa coming from Brazil compared to Ivory Coast, and no difference between Brazil and Indonesia ($p=0.13$). Belgian consumers probably link fair trade to South America since fair trade organizations mostly showcase small producers from South American countries in their campaigns making it the most familiar. In general however we can state that consumers do not differentiate much between the origins of the cacao production. This should not come as a surprise since there is no a priori reason to believe why an average consumer, without specific area or quality knowledge, would prefer cocoa from e.g. Africa more than from Asia. Besides, since cocoa is always produced far away from the Belgian consumers' point of view, any utility attached to local produce is excluded.

Lastly, we estimate a mixed logit model² (Table 3) to tackle the potential preference heterogeneity for the considered chocolate attributes. The standard deviations for the taste and quality attributes are significant. It is not surprising to find heterogeneous taste and quality preferences since different types of chocolate such as milk or fondant embody different percentages of cocoa. For the label attribute, we find that consumers have heterogeneous preferences for the bio-fair trade label, but homogeneous preferences for the fair trade label. These findings contrast with past literature on ethical labels which often showed strong sample heterogeneity towards fair trade as well as bio-fair trade labels (e.g. Ushida et al., 2014). Finally, we find no preference heterogeneity towards cocoa origin.

Results from CE1 show that consumers value a fair trade label in their decision to purchase chocolate. However it is unclear which specific fair trade characteristics drive this preference. Therefore a second choice experiment was run. Herein, we substitute the label attribute of CE1 with the main fair trade characteristics as attributes in CE2. In that way we are able to determine which underlying characteristics of fair trade are most and least valued by consumers without explicitly priming them with a label. Consumers are asked which chocolate bar they would chose depending on the presented attributes. We excluded origin and quality because seven attributes could result in cognitive overload during the choice process and especially considering the length of the full experiment. Nevertheless, before the start of CE2, participants were asked to assume that the chocolate bar consisted of their preferred taste and quality and that the cocoa came from their preferred country of origin.

Table 4 presents the baseline estimation results from the conditional and mixed logit estimations of CE2. All attribute coefficients are compared to the reference level being a chocolate bar produced with no specific environmental standards, with absence of a premium above the cocoa spot price paid to the producer, with no social investments in the smallholders' community and with no guarantee on improved working conditions. The regression results indicate that consumers have on average significant positive preferences for fair trade characteristics. However, the significant standard deviations indicate that preferences towards these characteristics are heterogeneous. On average, consumers prefer cocoa that is produced following certain environmental standards. In particular, they prefer the EU environmental standard above the organic standard ($p=0.056$). They dislike an unfair price paid to cocoa producers although they are indifferent between an average and fair remuneration ($p=0.55$). Consumers prefer a high level of social community investments such as capacity building and schools compared to none or some of these investments ($p=0.021$). Lastly, consumers attach importance to the degree to which labor conditions are improved and consequently controlled. The coefficient of improved labor conditions and a high control frequency is significantly different from all other coefficients in the model. These results imply that consumers have a strong preference for improved labor conditions in cocoa production but only if these claims are frequently controlled. This implies that fair trade organizations should not only control labour conditions frequently but also communicate this to their (potential) consumers.

4.2. WTP for explicit label versus implicit label characteristics

In this section, we explore whether the WTP for explicit fair trade labels (in CE1) equals the WTP for the implicit label characteristics (in CE2). As a result of our setup, we are able to test whether consumers' mean WTP for the (bio) fair trade label in CE1 differs from the mean WTP of the labels' underlying characteristics in CE2. From the attributes in CE2, we

² We assume that all attributes, except the price, have random parameters that are normally distributed.

reconstruct consumers' WTP for a bundle of fair trade characteristics. We create four bundles of fair trade characteristics. Table 5 describes the bundles of fair trade characteristics for which we calculate the WTP. The bundle "FT high" corresponds best to the definition of fair trade that most fair trade organizations currently adopt: retribution of a fair price to producers, care for the environment, social justice and community investment (Loureiro and Lotade, 2005). Therefore, we are mainly interested in the WTP of the bundle "FT High". However, we also calculated the WTP for the bundles "Bio FT high", "FT mid" and "Bio FT" because the fair trade definition is unclear to which extent for example fair labor conditions or community investments are translated in reality. The WTP for the three other bundles of fair trade characteristics indicates to what extent our results are sensitive to definition of fair trade.

We test whether the WTP of the explicit label differs from the WTP of a bundle of fair trade characteristics using the Welsh unequal variance t-test³. Since we want to compare the central tendency of two populations based on samples of unrelated data and consequently do not assume that both populations have the same standard deviation, the unequal variance t-test is preferred to the Student's t-test or Mann–Whitney U test (Ruxton, 2006). Table 6 indicates that the WTP for four bundles of underlying fair trade characteristics is significantly larger than the WTP for the explicit label value. These findings indicate that part of the lower effectiveness of fair trade labels can be attributed to the fact that these labels do not completely incorporate and communicate the ethical characteristics they stand for to consumers who do value these characteristics.

5. Future research

Much of the critique on choice experimental research shows that when ethical attributes are included, several issues such as hypothetical bias, social desirability, priming etc. arise (Lusk et al., 2011). Due to these issues, parameter coefficients can be distorted resulting in inflated WTP estimates. Therefore, we introduced three treatments in our full experimental design in order to test for the robustness of our estimations. In particular, the full experimental design consisted of two choice experiments, a survey, a tasting treatment, a priming treatment and an incentive compatibility treatment (Table 7). The experimental design was completely randomized to ascertain average treatment effects could be estimated with confidence. At this moment, we are analyzing these treatment effects and hope that these results will bring new insights to the literature on choice experiments.

³ Calculations of standard errors, test statistics, significance levels, and confidence intervals were based on the Delta Method.

6. Conclusion

To investigate how fair trade organizations and other stakeholders could expand the fair trade market, we directed our study towards the efficacy of fair trade labels. Particularly, we study whether these labels completely incorporate the ethical characteristics they stand for and whether they are able to convey these values to consumers. Therefore we conducted two similar choice experiments in a natural consumer environment in which Flemish consumers were asked to make a choice between two chocolate bars with varying characteristics. These two choice experiments allow us to derive the explicit WTP for a fair trade label and the WTP for a bundle of fair trade characteristics. Our analysis shows that there exist a significant difference between the explicit WTP for a fair trade label and the (implicit) WTP for the underlying fair trade characteristics. This means that part of the lower effectiveness of fair trade labels can be attributed to the fact that these labels do not completely incorporate and communicate the ethical characteristics they stand for to consumers who value these characteristics. Linking the fair trade label closer with peoples' values can therefore provide important opportunities to expand the fair trade market.

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Table 1. Attributes and attribute levels in CE1 and CE2

Choice experiment 1 (CE1)		Choice experiment 2 (CE2)	
Attribute	Attribute levels	Attribute	Attribute levels
Quality & Taste	30% premium cocoa	Environmental standard	No standards
	50% premium cocoa		EU standards
	70% premium cocoa		Organic standard
Label	No label	Price paid to producer	Bad
	Fair trade label		Average
	Bio-Fair trade label		Fair
Origin of cocoa	Ivory Coast	Level of community investment	Non existing
	Indonesia		Average
	Brazil		High
Price	€2	Working conditions + controls	Unimportant
	€3		Improved + infrequent controls
	€4		Improved + frequent controls
		Price	€1.5, € 2, €2.5, €3, €3.5, €4

Table 2. Descriptive statistics

Number of respondents	144
<i>Socio-economic characteristics</i>	
Average age (years)	42
Female (%)	38
Higher education – bachelor, master, PhD (%)	72
Net income (euro/month) (%)	
0-1000	4
1001-2000	17
2001-3000	14
3001-4000	19
4001plus	22
Not specified	24
Travelled outside EU (%)	76
Member nature protection organization/NGO (%)	20
Ever did volunteer work (%)	49
Donate yearly to charity (%)	73
<i>Fair trade (FT) and consumers</i>	
FT purchasing behavior (%)	
(Almost) never	53
Regularly	42
(Almost) always	5
FT compared to conventional produce	
Taste (worse-same-better)	23-60-17
Price (worse-same-better)	65-30-5
Availability (worse-same-better)	52-47-1
Correct knowledge of FT (%)	27
Belief in FT (%)	
FT is used as a marketing tool and does not contribute	3
FT does not fulfil its promises but remains better than conventional products	27
FT guarantees what it promises, but personally I do not care	21
FT guarantees what it promises, and personally I do care	49

Table 3. Baseline estimation results for CE1 (Clogit and mixed logit model)

		Clogit	Mixlogit	
			Mean	SD
<i>Quality & Taste</i>	70% Cocoa	1.532 (0.255)***	3.295 (1.081)***	4.006 (1.728)**
	50% Cocoa	0.924 (0.172)***	1.780 (0.608)***	1.930 (0.933)**
<i>Label</i>	Bio-Fair trade	0.876 (0.177)***	2.385 (0.913)***	1.365 (0.688)**
	Fair trade	0.524 (0.161)***	1.649 (0.733)**	0.101 (1.161)
<i>Origin of cocoa</i>	Brazil	0.238 (0.144)*	0.176 (0.385)	1.258 (0.974)
	Indonesia	-0.0511 (0.163)	-0.642 (0.502)	2.194 (0.998)**
<i>Price</i>		-0.452 (0.105)***	-0.979 (0.332)***	
<i>ASC</i>		-1.819 (0.383)***	-2.677 (0.778)***	
Observations		1296	1296	

Robust standard errors in parentheses , *** p<0.01, ** p<0.05, * p<0.1

Table 4. Baseline estimation results for CE2 (Clogit & mixed logit model).

		Clogit	Mixlogit	
			Mean	SD
<i>Environmental standards</i>	Organic	0.669 (0.136)***	0.807 (0.197)***	1.083 (0.288)***
	EU	0.869 (0.133)***	1.187 (0.206)***	1.026 (0.272)***
	Fair	0.818 (0.132)***	1.180 (0.201)***	0.686 (0.301)**
<i>Producer price</i>	Average	0.750 (0.134)***	1.157 (0.208)***	0.857 (0.313)***
	High	0.537 (0.115)***	0.719 (0.185)***	0.556 (0.321)*
<i>Community investment</i>	Average	0.269 (0.112)**	0.265 (0.189)	0.911 (0.281)***
	Improved conditions with frequent controls	1.304 (0.145)***	1.881 (0.254)***	1.376 (0.271)***
<i>Labor conditions</i>	Improved conditions with infrequent controls	0.578 (0.128)***	0.745 (0.182)***	-0.668 (0.323)**
<i>Price</i>		-0.451 (0.0824)***	-0.661 (0.140)***	
<i>ASC</i>		-0.547 (0.426)	-0.613 (0.431)	
Observations		2580	2580	

Robust standard errors in parentheses , *** p<0.01, ** p<0.05, * p<0.1

Table 5. Bundles of fair trade characteristics for which we calculate the WTP

		<i>Environmental standards</i>	<i>Producer price</i>	<i>Community investment</i>	<i>Working conditions</i>
Bio high	FT	Organic	Fair	High	Improved with frequent controls
Bio high	FT	Organic	Average	Average	Improved with infrequent controls
FT High		EU standards	Fair	High	Improved with frequent controls
FT Mid		EU standards	Average	Average	Improved with infrequent controls

Table 6. Testing for differences in WTP for direct label versus implicit label

CE			CE2			Unequal variance t-test (two-tailed)	
Label	Mean WTP	Mean (SE)	Bundle of FT characteristics	Mean WTP	Mean (SE)	t	Sig. (p)
FT	1.68	0.47	FT high	7.51	1.56	-3.57	0.0005
			FT mid	5.07	1.13	-2.76	0.0063
Bio FT	2.44	0.58	Bio FT high	6.94	1.45	-2.88	0.0045
			Bio FT mid	4.50	1.02	-1.75	0.0807

Table 7. Sequence of treatments in the full experimental design

Treatments	Name	Percentage treated of sample		
Treatment 1	Experimental versus hypothetical	Incentive compatible (50%)	Hypothetical (50%)	
		Socio-demographic questions (100%)		
Treatment 2	Priming effect	Fair trade questions before CE (50%)	Fair trade questions after CE (50%)	
Treatment 3	Tasting of chocolate	No tasting (33%)	Blind tasting (33%)	Full info tasting (33%)
Treatment 4	Randomization of choice experiments	CE1 first (50%)		CE2 first (50%)